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Job No.: CTCE/BBMP/W.No.18/RR/Kerb Stone/2013-14 16.06.2014

CEMENT CONCRETE CORE (KERB STONE) TEST REPORT

Name of Client	:	**Asst. Executive Engineer,** Hebbal Sub Division, BBMP, Bangalore.
Name of Agency	:	**Mr. R. Rajendra,** Contractor, Bangalore.
Name of work	:	Construction of drain Lottegollahalli School road in Ward No.18, BBMP, Bangalore.
Reference	:	EE/H/AE/WO/196/2013-14 Dated: 17.02.2014
Techinical Reference	:	IS:516-1959 (Reaffirmed 1999), SP-24:1983.
Date of Testing	:	16.06.2014
Grade of Concrete	:	M_{15}

Sl. No.	Dia of Core D (mm)	Height of Core H (mm)	Core Wt (Kg)	Density of Core (kg / m^3)	H / D	Correction factor (Based on H/D)	Failure Load (kN)	Core Strength (N/mm^2)	Correction Factor for the Dia. (Strength of the Core x 1.08)	Corrected Cylinder Compressive Strength (N/mm^2)	Equivalent Cube Compressive Strength (N/mm^2)
1	50.00	80.00	0.403	2565.58	1.60	0.960	25.10	12.78	13.81	13.25	16.57
2	50.00	82.00	0.418	2596.17	1.64	0.970	25.90	13.19	14.25	13.82	17.27
3	50.00	81.00	0.410	2577.92	1.62	0.965	25.65	13.06	14.11	13.61	17.02

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Job No.: CTCE/BBMP/W.No.18/RR/CUBE/2013-14

21.06.2014

TEST REPORT ON CONCRETE CUBES

Client	: **Asst. Executive Engineer,** Hebbal Sub Division, BBMP, Bangalore.
Agency	: **Mr. R. Rajendra,** Contractor, Bangalore.
Name of the work	: Construction of drain Lottegollahalli School road in Ward No.18, BBMP, Bangalore.
Reference	: EE/H/AE/WO/196/2013-14 Dated: 17.02.2014
Sample ID	: Cement Concrete
Size of cubes	: 150mmx150mmx150mm
Cross Sectional Area	: 22500 mm^2
Technical Reference	: IS: 516-1959 (Reaffirmed 2008)
Grade of Concrete	: M_{20}
Compressive Strength as on	: 7^{th} day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	14.06.2014	21.06.2014	8.264	352.3	15.66
2	14.06.2014	21.06.2014	8.374	365.3	16.24
3	14.06.2014	21.06.2014	8.426	372.3	16.55

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Job No.: CTCE/BBMP/W.No.18/RR/CUBE/2013-14

23.06.2014

TEST REPORT ON CONCRETE CUBES

Client	: **Asst. Executive Engineer,** Hebbal Sub Division, BBMP, Bangalore.
Agency	: **Mr. R. Rajendra,** Contractor, Bangalore.
Name of the work	: Construction of drain Lottegollahalli School road in Ward No.18, BBMP, Bangalore.
Reference	: EE/H/AE/WO/196/2013-14 Dated: 17.02.2014
Sample ID	: Cement Concrete
Size of cubes	: 150mmx150mmx150mm
Cross Sectional Area	: 22500 mm^2
Technical Reference	: IS: 516-1959 (Reaffirmed 2008)
Grade of Concrete	: M_{30}
Compressive Strength as on	: 7^{th} day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	16.06.2014	23.06.2014	8.194	356.6	15.85
2	16.06.2014	23.06.2014	8.347	368.5	16.38
3	16.06.2014	23.06.2014	8.256	370.2	16.45

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Job No.: CTCE/BBMP/W.No.18/RR/Pre Cast slab/2013-14 16.06.2014

TEST REPORT CONCRETE CORE (PRE CAST SLAB)

Name of Client : **Asst. Executive Engineer,** Hebbal Sub Division, BBMP, Bangalore.

Name of Agency : **Mr. R. Rajendra,** Contractor, Bangalore.

Name of work : Construction of drain Lottegollahalli School road in Ward No.18, BBMP, Bangalore.

Reference : EE/H/AE/WO/196/2013-14 Dated: 17.02.2014

Techinical Reference : IS:516-1959 (Reaffirmed 1999), SP-24:1983.

Date of Testing : 16.06.2014

Grade of Concrete : M_{20}

Sl. No.	Dia of Core D (mm)	Height of Core H (mm)	Core Wt (Kg)	Density of Core (kg / m^3)	H / D	Correction factor (Based on H/D)	Failure Load (kN)	Core Strength (N/mm^2)	Correction Factor for the Dia. (Strength of the Core x 1.08)	Corrected Cylinder Compressive Strength (N/mm^2)	Equivalent Cube Compressive Strength (N/mm^2)
1	50.00	78.00	0.384	2507.30	1.56	0.955	32.00	16.30	17.60	16.81	21.01
2	50.00	79.00	0.390	2514.25	1.58	0.960	33.00	16.81	18.15	17.43	21.78
3	50.00	80.00	0.399	2540.11	1.60	0.965	33.50	17.06	18.43	17.78	22.23

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Job No.: CTCE/BBMP/W.No.18/RR/CEMENT/2013-14

Date: 09.06.2014

TEST REPORT

CLIENT	:	**Asst. Executive Engineer,** Hebbal Sub Division, BBMP, Bangalore.
AGENCY	:	**Mr. R. Rajendra,** Contractor, Bangalore.
NAME OF THE WORK	:	Construction of drain Lottegollahalli School road in Ward No.18, BBMP, Bangalore.
REFERENCE	:	EE/H/AE/WO/196/2013-14 Dated: 17.02.2014
SAMPLE ID	:	CEMENT
SAMPLES SUPPLIED BY	:	AGENCY

The results of the tests conducted on the cement sample are as follows:

Sl.No	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 8112-1989
1	a) Initial Setting Time	IS-4031 (Part -5)	135 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part -5)	480 Minutes	Not More than 600 Minutes
2	Soundness	IS-4031 (Part 3) by the Le-Chatelier method	1 mm	Not more than 10 mm
3	Standard Consistency	IS-4031 (Part -4)	26.00 %	-

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Job No.: CTCE/BBMP/W.No.18/RR/SAND/2013-14 : 09.06.2014

TEST REPORT ON FINE AGGREGATES (SAND)
IS 383-1970 (RA- 2002)

Client : **Asst. Executive Engineer,** Hebbal Sub Division, BBMP, Bangalore.

Agency : **Mr. R. Rajendra,** Contractor, Bangalore.

Name of Work : Construction of drain Lottegollahalli School road in Ward No.18, BBMP, Bangalore.

Reference : EE/H/AE/WO/196/2013-14 Dated: 17.02.2014

Date of Testing : 09.06.2014

Material : Sand Total Wt. of Aggregates in gms **2000**

Is Sieve Size in mm	Weight Retained (gm)	Retained Weight in %	Cumulative Retained Weight in %	Cumulative Weight Passing in %	Spec.Limits For Zone-II
10	0	0	0	100	100
4.75	88	4.40	4.40	95.6	90-100
2.36	196	9.80	14.20	85.8	75-100
1.18	351	17.55	31.75	68.3	55-90
600 Micron	532	26.60	58.35	41.7	35-59
300 Micron	495	24.75	83.10	16.9	8-30
150 Micron	250	12.50	95.60	4.4	0-10

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Job No.: CTCE/BBMP/W.No.18/RR/AGG/2013-14 : 09.06.2014

TEST REPORT ON COARSE AGGREGATES
IS 383-1970 (RA- 2002)

Client : **Asst. Executive Engineer,** Hebbal Sub Division, BBMP, Bangalore.

Agency : **Mr. R. Rajendra,** Contractor, Bangalore.

Name of Work : Construction of drain Lottegollahalli School road in Ward No.18, BBMP, Bangalore.

Reference : EE/H/AE/WO/196/2013-14 Dated: 17.02.2014

Date of Testing : 09.06.2014

Material : 40mm Aggregates

Total Wt. of Aggregates in gms **25400**

Is Sieve Size in mm	Weight Retained (gm)	Retained Weight in %	Cumulative Retained Weight in %	Cumulative Weight Passing in %	Spec.Limits
80	0	0	0	100	100
40	1010	3.98	3.98	96.02	95-100
20	16325	64.27	68.25	31.75	30-70
10	5040	19.84	88.09	11.91	10-35
4.75	2640	10.39	98.48	1.52	

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Job No.: CTCE/BBMP/W.No.18/RR/STEEL/2013-14 10.06.2014

TEST REPORT ON REINFORCEMENT STEEL

Client	:	**Asst. Executive Engineer,** Hebbal Sub Division, BBMP, Bangalore.
Agency	:	**Mr. R. Rajendra**, Contractor, Bangalore.
Name of the work	:	Construction of drain Lottegollahalli School road in Ward No.18, BBMP, Bangalore.
Reference	:	EE/H/AE/WO/196/2013-14 Dated: 17.02.2014
Date of Test	:	10.06.2014
Technical Reference	:	IS: 1786-2008

Sl. No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm²	Tensile strength (Ultimate stress) N/mm²	Elongation percent gauge length		
1	10	0.62	513	547	13.05	O.K	O.K

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Job No.: CTCE/BBMP/W.No.18/RR/STEEL/2013-14 10.06.2014

TEST REPORT ON REINFORCEMENT STEEL

Client	:	**Asst. Executive Engineer,** Hebbal Sub Division, BBMP, Bangalore.
Agency	:	**Mr. R. Rajendra**, Contractor, Bangalore.
Name of the work	:	Construction of drain Lottegollahalli School road in Ward No.18, BBMP, Bangalore.
Reference	:	EE/H/AE/WO/196/2013-14 Dated: 17.02.2014
Date of Test	:	10.06.2014
Technical Reference	:	IS: 1786-2008

Sl. No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm²	Tensile strength (Ultimate stress) N/mm²	Elongation percent gauge length		
1	12	0.89	515	549	13.35	O.K	O.K

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19.06.2014

TEST REPORT ON CONCRETE CUBES

Client	: **Asst. Executive Engineer,** Hebbal Sub Division, BBMP, Bangalore.
Agency	: **Mr. R. Rajendra,** Contractor, Bangalore.
Name of the work	: Construction of drain Lottegollahalli School road in Ward No.18, BBMP, Bangalore.
Reference	: EE/H/AE/WO/196/2013-14 Dated: 17.02.2014
Sample ID	: RCC Drain Concrete
Size of cubes	: 150mmx150mmx150mm
Cross Sectional Area	: 22500 mm^2
Technical Reference	: IS: 516-1959 (Reaffirmed 2008)
Grade of Concrete	: M_{20}
Compressive Strength as on	: 7^{th} day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	12.06.2014	19.06.2014	8.426	362.8	16.12
2	12.06.2014	19.06.2014	8.398	351.4	15.62
3	12.06.2014	19.06.2014	8.275	342.3	15.21

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TEST REPORT ON CONCRETE CUBES

Client	: **Asst. Executive Engineer,** Hebbal Sub Division, BBMP, Bangalore.
Agency	: **Mr. R. Rajendra,** Contractor, Bangalore.
Name of the work	: Construction of drain Lottegollahalli School road in Ward No.18, BBMP, Bangalore.
Reference	: EE/H/AE/WO/196/2013-14 Dated: 17.02.2014
Sample ID	: Covering Slab Concrete
Size of cubes	: 150mmx150mmx150mm
Cross Sectional Area	: 22500 mm^2
Technical Reference	: IS: 516-1959 (Reaffirmed 2008)
Grade of Concrete	: M_{20}
Compressive Strength as on	: 7^{th} day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	13.06.2014	20.06.2014	8.145	349.3	15.52
2	13.06.2014	20.06.2014	8.256	353.4	15.71
3	13.06.2014	20.06.2014	8.399	369.7	16.43

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